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Design & Develop

Designing Digital Content For Users With Cognitive Disabilities

According to the Centers for Disease Control and Prevention (CDC), "more than 28.7% of adults in the United States have a disability" and 13.9% of U.S. adults have a cognitive disability . Cognitive disabilities encompass a broad range of conditions that affect cognitive functions such as memory, attention, perception, learning, problem solving, and comprehension. These disabilities can vary significantly in their impact and may include conditions like dyslexia, autism spectrum disorders, Attention Deficit Hyperactivity Disorder (ADHD), and intellectual disabilities. In today's digital age, ensuring digital content is accessible to all users, including those with cognitive disabilities, is paramount. Read below to explore best practices for designing and developing digital content, including but not limited to web content, electronic documents, mobile applications, and kiosks, that enhances usability and inclusivity for users with cognitive disabilities.

Simplify Meaning and Navigation

- Use plain, straightforward language, avoiding jargon, complex sentences, and ambiguous terms. Complex language can cause cognitive overload, leading to confusion, frustration and making it difficult to extract relevant information.
- Present information in manageable sections and avoid overcrowding screens with excessive content to reduce cognitive overload.
- Use simple and consistent layouts with clear navigation to help users find information easily.
- Avoid clutter and unnecessary elements that can distract or overwhelm users.
- Use consistent visual cues and icons to convey meaning and guide users through interactions.

- Use recognizable icons and visual cues to help users quickly understand functionality. Icons should be accompanied by descriptive labels or text.
- Provide clear feedback for user actions and errors, using plain language and avoiding ambiguous error messages.
- Design predictable navigation paths and provide clear instructions for interactive elements.

Enhance Visual Design

- Use readable fonts such as sans-serif fonts and ensure sufficient font size with ample spacing between lines and paragraphs.
- Ensure sufficient color contrast between text and background to aid readability.
- Allow users to customize settings such as font size, color themes, and interaction speed to accommodate individual preferences and needs. If users cannot customize settings, ensure font size is at least 14 point font size.

Use Clear Content Structure

- Use hierarchical headings such as Heading 1, Heading 2, and Heading 3 to organize content logically. This helps users navigate and understand the structure of the information.
- Use lists and bullets to break down complex information into easy to understand sections.
- Ensure tables are simple, well-structured, and include appropriate headers and captions to aid comprehension.
- Ensure forms are simple, form fields that are clearly labeled and include notation of required fields and requested data input formats.

Make Multimedia, Images, and Interactive Content Easy to Understand

- Provide descriptive alternative text for images, graphics, and multimedia elements. Alternative text should be concise yet descriptive of the content and function of the image.
- Include captions and transcripts for videos to make auditory content accessible to users with hearing impairments or those who prefer text-based content.
- Include audio descriptions for non-verbal cues to ensure all viewers can understand the context and emotions conveyed.

- Avoid distracting animations and flashing elements as they may cause sensory overload, difficulty focusing, and challenges in navigating through content effectively.
- Design interactive elements with ample size and spacing to reduce the likelihood of errors. Ensure buttons and clickable areas are easy to identify and use.

Lastly, test with real users. Conduct usability testing with designated individuals who have cognitive disabilities to gather feedback and identify areas for improvement.

Designing and developing ICT for users with cognitive disabilities is not just a matter of inclusivity but a crucial step toward creating accessible digital content for everyone. By prioritizing clarity, simplicity, and user-centered design, you ensure digital content serves the intended purpose without adding unnecessary complexity or compromising security by requiring a user to ask for help with sensitive information such as ATM kiosks and passwords.

Additional Resources:

- For a full list of WCAG 2.0 AA criteria mapped to impact for users with cognitive disabilities, review Mapping of WCAG 2.0 to Functional Performance Criteria.
- For more information on Universal Design, visit Universal Design and Accessibility.

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